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NEVADA DIVISION OF ENVIRONMENTAL PROTECTION
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STATE OF NEVADA

Department of Conservation & Natural Resources
DIVISION OF ENVIRONMENTAL PROTECTION

Brian Sandoval, Governor
Leo M. Drozdoff, P.E., Director
Colleen Cripps, Ph.D., Administrator

October 30, 2014

Michael Rojo
Environmental Services, Supervisor
NV Energy
6226 W Sahara Ave M/S 30
Las Vegas, NV 89146

Re: **NV Energy (NVE)**
Reid Gardner Station (RGS)
NDEP Facility ID #H-000530
Nevada Division of Environmental Protection (NDEP) *Preliminary List of Conceptual Site Model (CSM) Data Gaps*

Dear Mr. Rojo:

At the request of NVE during the October 8, 2014 RGS work shop and project meeting, the NDEP is providing a preliminary list of CSM data gaps. NDEP understands that NVE has requested this list in an effort to better develop the CSM and better develop work plans intended to fill data gaps at the Site. CSMs evolve as data are assimilated and site conditions are better understood. As data are collected and the RGS CSM evolves, other data gaps may become apparent. NDEP will provide input for NVE for other potential data gaps accordingly.

Please review the preliminary list of CSM data gaps from NDEP, located in Attachment A. Please contact me with any questions or comments about this letter at (775) 687-9396 or aoakley@ndep.nv.gov

Sincerely,

Alison Oakley, CEM
Environmental Scientist III
Bureau of Corrective Actions
NDEP-Carson City Office

ec: Jeff Collins, Nevada Division of Environmental Protection (NDEP)
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cc: Alteha Tom, Moapa Band of Paiutes, Chairperson, P.O. Box 340, Moapa, NV 89025
Darren Daboda, Moapa Band of Paiutes, Environmental Director, P.O. Box 340, Moapa, NV 89025
Clark County Emergency Management, 500 S. Grand Central Parkway 6th Floor, P.O. Box 551713, Las Vegas, NV 89155-1713
Anitha Rednam, Department of Water Resources, 1416 9th Street, Room 1140, Sacramento CA 95814

Attachment A

Preliminary List of Conceptual Site Model (CSM) Data Gaps

1. Primary and Secondary Sources: Characterization of the primary, and where applicable, secondary sources at the Site. These include, but are not limited to: Hogan Wash, all of the pond areas, the Unit 1, 2, and 3 Coal Piles, Unit 4 Coal Pile, former lube oil rack, former gasoline UST and Warehouse 1, and the various diesel source areas.

   An example central to the CSM are the pond solids and the secondary source beneath the ponds. Data are needed to support understanding of the potential leaching of these materials under current and future Site conditions. This may include meteoric water mobility (MWM) testing or other leach testing. Due to the complexity of the Site, the secondary source data are also tied to the understanding of the geochemical site model. A better understanding of the secondary sources is needed to better understand the factors impacting the fate and transport in groundwater including precipitation/dissolution and adsorption/desorption. Aquifer adsorption capacity may also need to be better characterized with physical measurements (as opposed to theoretical modeling estimates) to support future Site cleanup decisions.

2. Lateral and vertical extent of contamination in groundwater: Examples include:
   a) Vertical extent of contamination beneath former and current ponds in the alluvial valley including 4A, 4B, 4C, D, E, F and G, and the lateral extent down gradient of these ponds . Data need to be collected that will ultimately support decisions regarding the attenuation of TDS and metals.
   b) TDS impacts downgradient of the property boundary at the dairy and beneath the dairy property, especially in deeper groundwater, and assessment of where this groundwater might eventually discharge to the Muddy River.
   c) TDS impacts observed in wells HM-52R, HM-53, and HM-54.

3. Site hydrogeology: Subsurface characterization of hydrogeology is needed to support understanding of fate and transport of COCs. Examples include:
   a) Investigation and characterization of a potential preferential flow path east of pond 4C-2 and north of pond 4A to the alluvial fill/Muddy River Formation contact between BG-1 and IMW-3.
   b) Investigation and characterization of a preferential flow path extending southeast from MW-9 and IMW-3 toward the spring located on the north side of the Muddy River across from the dairy property.
   c) Investigation of features that currently do or may impact future groundwater movement at the Site including but not limited to:
      i. Dewatering wells,
      ii. Sources of groundwater recharge (e.g., raw water ponds), and
      iii. Subsurface impediments to groundwater flow (e.g., building foundations, pond structures, etc.)
   d) Additional characterization of aquifer properties; for example additional tests in selected area or in specific hydrostratigraphic units.

4. Characterization of mass flux: understanding of mass flux along previously discussed transects perpendicular to groundwater flow and along the down gradient property boundary will be important in supporting future Site decisions.

5. Muddy River study: Completion of the Muddy River study is central to the CSM and will be necessary to adequately assess potential Site risk and receptor impact.

6. Impacts of Muddy River flow on groundwater: This may be considered a component of the Muddy River study, but understanding the impacts of significant recharge events and/or river stage flooding on groundwater flow and groundwater quality is central to the CSM and decisions regarding future impacts from the Site.

7. Evaluation of plume stability: Evaluating and understand plume stability at the Site, including statistical trend analysis (EPA methodology, MAROS, or equivalent methods approved by NDEP), will be central to supporting future Site decisions.